Technical Data Sheet

Purified Rat Anti-Mouse CD11b

Product Information

Material Number:
Alternate Name:
Size:
Concentration:
Clone:
Immunogen:
Isotype:
Reactivity:
Storage Buffer:

550282

Itgam; Integrin alpha-M; Ly-40; Mac-1a; Mac-1 alpha; CR3A; CR-3 alpha chain 1.0 ml 125 μg/ml M1/70 Mouse Splenic Cells Rat (DA) IgG2b, κ QC Testing: Mouse Aqueous buffered solution containing BSA, goat serum, and ≤0.09% sodium azide.

Description

The M1/70 monoclonal antibody specifically binds to CD11b, also known as Integrin alpha M (Itgam or α M). CD11b is a 170-kDa type 1 transmembrane glycoprotein and belongs to the Integrin alpha chain family. CD11b serves as the alpha chain of the heterodimeric Mac-1 integrin (CD11b/CD18, α M β 2), also known as complement receptor 3 (CR3). Mac-1 mediates adhesion to ICAM-1 (CD54), ICAM-2 (CD102), fibrinogen and binding to C3bi. Mac-1 is expressed at varying levels on granulocytes, macrophages, myeloid-derived dendritic cells, natural killer cells, microglia, and B-1 B lymphocytes. Mac-1 expression is rapidly up-regulated on neutrophils after activation, in the same time period that CD62L (L-selectin) is shed from the cell surface. The M1/70 antibody reportedly blocks cell adherence and C3bi binding but does not block cell-mediated lysis. Cross-reaction of the M1/70 antibody with CD11b expressed on human monocytes, polymorphonuclear leukocytes, and NK cells has been reported.



Immunohistochemical staining of CD11b positive cells. An acetone-fixed, frozen section of normal mouse spleen was stained with the Purified Rat Anti-Mouse CD11b antibody. CD11b positive cells can be identified by the intense brown labeling of cell surface membranes (20X magnification).

Preparation and Storage

Store undiluted at 4°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Application Notes

Application

Flow cytometry	Routinely Tested
Immunohistochemistry-frozen	Tested During Development
Immunohistochemistry-formalin (antigen retrieval required)	Not Recommended

Recommended Assay Procedure:

Immunohistochemistry: The Purified Rat Anti-Mouse CD11b antibody stains mouse macrophages, granulocytes, dendritic cells, and NK cells. For optimal indirect immunohistochemical staining, investigators are encouraged to titrate this antibody (suggested starting range of a 1:10 to 1:50 dilution) and visualize via a three-step staining procedure using a combination of Biotin Goat Anti-Rat Ig (Cat. No. 559286) as the secondary antibody and Streptavidin HRP (Cat. No. 550946) together with a DAB detection system (Cat. No. 550880). **Investigators should note that this antibody is not recommended for formalin-fixed paraffin embedded sections**.

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Suggested Companion Products

Catalog Number	Name	Size	Clone
559478	Purified Rat IgG2b, ĸ Isotype Control	0.25 mg	A95-1
559286	Biotin Goat Anti-Rat Ig	0.5 mg	Polyclonal
550946	Streptavidin HRP	50 ml	(none)
550880	DAB Substrate Kit	500 tests	(none)

Product Notices

- Since applications vary, each investigator should titrate the reagent to obtain optimal results. 1.
- 2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
- 3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
- Sodium azide is a reversible inhibitor of oxidative metabolism; therefore, antibody preparations containing this preservative agent must not 4. be used in cell cultures nor injected into animals. Sodium azide may be removed by washing stained cells or plate-bound antibody or dialyzing soluble antibody in sodium azide-free buffer. Since endotoxin may also affect the results of functional studies, we recommend the NA/LE (No Azide/Low Endotoxin) antibody format, if available, for in vitro and in vivo use.
- 5. This antibody has been developed for the immunohistochemistry application. However, a routine immunohistochemistry test is not
- performed on every lot. Researchers are encouraged to titrate the reagent for optimal performance.
- Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols. 6.

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